Section 1: Introduction

Vallecitos Water District (VWD) is a public agency responsible for supplying water, wastewater and recycled water service to a 45-square mile area within northern San Diego County that includes the City of San Marcos, parts of the cities of Vista, Carlsbad, Escondido, and unincorporated areas within the County of San Diego. Its service area includes the State Highway 78 corridor and is bordered by Interstate 15 on its eastern boundary. Figure 1-1 illustrates VWD's location and service boundary.

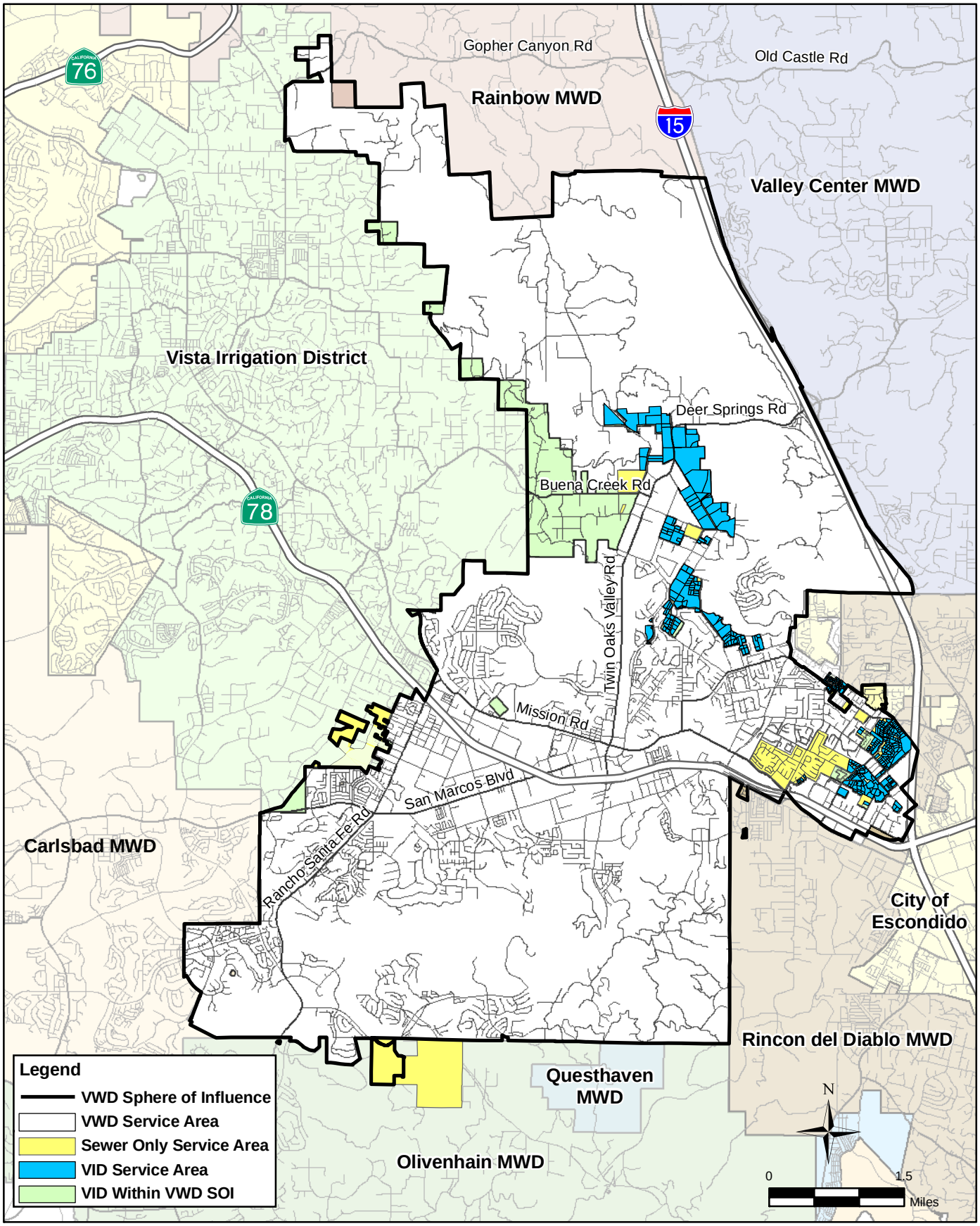
VWD is a member agency of the San Diego County Water Authority (SDCWA) and currently receives 100% of its potable water supply from this water wholesaler. VWD serves potable water to approximately 87,700 people, as well as commercial, light industrial, institutional, construction, landscape irrigation and agricultural customers. VWD also provides wastewater collection services to a 23-square mile area, as illustrated in Figure 1-2, that serves approximately 69,000 people, as well as commercial, light industrial, institutional, construction, landscape irrigation and agricultural customers.

Since adopting its Updated 2005 Urban Water Management Plan (UWMP), VWD has made great strides in long-range planning to maintain a sustainable and reliable water supply for the future. Since 2005, VWD added an additional 40-million-gallon potable water storage reservoir to assist in emergencies and peak demand management. VWD

also doubled the recycled water output at its Meadowlark Water Reclamation Facility and implemented aggressive water conservation outreach efforts, which lowered the overall demand for imported water into the region.

VWD has prepared this 2010 UWMP in accordance with the Urban Water Management Planning Act (California Water Code §10610 through 10656). This document covers water demand, supply, quality, reliability, water recycling and Best Management Practices programs and policies as dictated by California Water Code (CWC) §10608.36.

This section will provide an overview of the regulatory process of this Urban Water Management Plan, and will provide background information regarding VWD and its service area. Further, this section will detail VWD's master planning process and the generation of its Capital Improvement Program (CIP).



SOURCE: LAFCO SOI - Affirmed 08-06-2007
VWD GIS Data - 07-17-2008, provided by District

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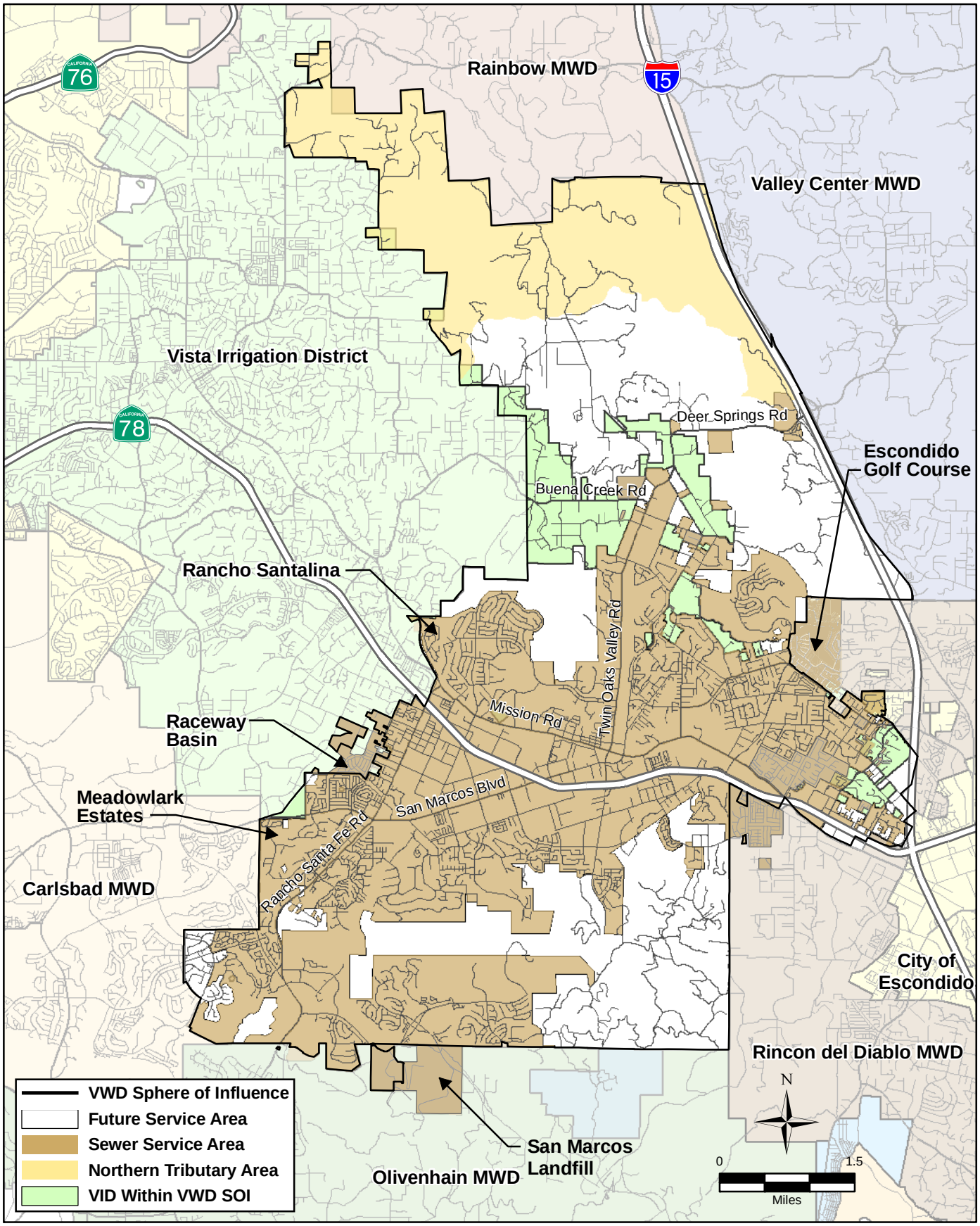
WATER SERVICE AREA

FIGURE 1-1



SOURCE: LAFCO SOI - Affirmed 08-06-2007
VWD GIS Data - 07-17-2008, provided by District

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WASTEWATER SERVICE AREA

FIGURE 1-2

1.1 Regulatory Overview

The Vallecitos Water District is an independent special district governed by five representatives voted into office by the local citizens within its service boundary. The long-term mission of the District is to effectively and efficiently meet the needs of its service area within the expressed and implied powers provided by law, as stated in its adopted Mission Statement, below.

> "*To provide planned, effective, equitable and fiscally sound water and sewer service to its residential, commercial and institutional customers. Recognizing that its resources are limited and valuable, the District has made it a priority to preserve and protect these resources, promoting their conservation and reuse while maintaining a high level of community awareness so that future generations may continue to be served."*

The following regulations apply to this 2010 UWMP and have dictated its preparation.

1.1.1 California Urban Water Management Planning Act

UWMPs are prepared by California's urban water suppliers to support their long-term resource planning and ensure adequate water supplies are available to meet existing and future water demands. The California Urban Water Management Planning Act (Act) requires every urban water supplier that provides water for municipal services to more than 3,000 connections or is supplying more than 3,000 acre-feet of water annually to assess the reliability of its water sources over a 20-year planning horizon considering normal and dry years. This assessment is to be included in the supplier's UWMP, which is to be prepared and adopted every 5 years and submitted to the Department of Water Resources (DWR). VWD complied with the Act in 2005 with the adoption of its 2005 UWMP.

DWR's *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 UWMP* served as a blueprint to VWD as it compiled this 2010 UWMP.

Major amendments made to the Act since preparation of the 2005 UWMP include:

- CWC §10631.1 requires a plan by retail water suppliers to include water use projections for single- and multi-family residential housing needed for lower income and affordable households, to assist with compliance with the existing requirement under §65589.7 of the Government Code, that suppliers grant a priority for the provision of service to housing units affordable to lower income households.

- CWC §10621(b) clarifies that every urban water supplier preparing a plan must give at least 60 days advanced notice to any city or county prior to the public hearing on the plan within which the supplier provides water supplies to allow for consultation on the proposed plan.

- CWC §10631(j) deems water suppliers that are members of the California Urban Water Conservation Council (CUWCC) and comply with the Memorandum of Understanding, as it may be amended, to be in compliance with the requirement to describe the supplier's water demand management measures in its UWMP.

- CWC §10631.7 required DWR, in consultation with the CUWCC, to convene a technical panel, no later than January 1, 2009, to provide information and recommendations to DWR and the Legislature on new demand management measures, technologies, and approaches. The panel and DWR were to report the Legislature on their findings no later than January 1, 2010, and each five years thereafter.

- CWC §10633(d) clarifies that the "indirect potable reuse" of recycled water should be described and quantified in the plan, including a determination regarding the technical and economic feasibility of serving those uses.

- CWC §10644(c) requires DWR to recognize exemplary efforts by water suppliers by obligating DWR to identify and report to the technical panel, described above and "exemplary elements" of individual water suppliers' plans, meaning any water demand management measures adopted and implemented by specific urban water suppliers that achieve water savings significantly above the levels required to meet the conditions of state grant or loan funding.

- CWC §10631.5 was amended to address conditions of eligibility for grants or loans from DWR. DWR will consider whether the urban water supplier has submitted an updated plan when determining eligibility for funds made available pursuant to any program administered by the department.

1.1.2 Senate Bill 7 of the Seventh Extraordinary Session of 2009

In addition to changes in the Act, the state Legislature passed Senate Bill X_{7-7}, referred to as SB7, on November 10, 2009, which became effective February 3, 2010. This new law was the water conservation component to the Delta legislation package, and seeks to achieve a 20 percent statewide reduction in urban per capita water use in California

by December 31, 2020. The law requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020, an interim water reduction target by 2015, and incorporate this information into the 2010 UWMP.

Urban water providers such as VWD must include in their 2020 plans the following information: (1) baseline daily per capita water use; (2) urban water use target; (3) interim water use target; (4) compliance daily per capita water use, including technical bases and supporting data for those determinations. An urban retail water supplier may update its 2020 urban water use target in its 2015 UWMP (CWC §10608.20). Wholesale water suppliers must include in their UWMPs an assessment of their present and proposed future measures, programs and policies to help retail agencies achieve their water use reduction targets (CWC §10608.36.).

A Regional Alliance allows individual urban retail water suppliers to combine their individual targets into a regional target. An urban retail water supplier is required to meet either their own or the regional water conservation target in order to comply with SB7. VWD has entered into a Regional Alliance with Olivenhain Municipal Water District (OMWD), Rincon del Diablo Municipal Water District (Rincon MWD), and San Dieguito Water District (SDWD). A copy of the "Cooperative Agreement to Establish and Carry Out a Regional Alliance in Accordance with Part 2.55 of the California Water Code" is included in Appendix H.

1.1.3 Senate Bills 610 and 221

CWC §10910 through 10914 and Government Code §65867.5, 66455.3 and 66473.7 (commonly referred to as SB 610 and SB 221) amended state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the environmental documentation of certain large proposed projects. SB 221 requires affirmative written verification from the water purveyor of the public water system that sufficient water supplies are available for certain large residential subdivisions of property prior to approval of the tentative map.

VWD has used documentation from Metropolitan Water District of Southern California (MWD) and SDCWA in preparing the water supply assessments and written verifications required under state law in producing this UWMP.

1.1.4 2010 Plan Preparation and Implementation

To adequately demonstrate regional water supply reliability through the next 25 years, this UWMP quantifies the regional mix of existing and projected local and imported supplies necessary to meet future demands within VWD's service area. Although this UWMP includes specific documentation regarding VWD's supplies, plans submitted by wholesalers (SDCWA and MWD) provide further details that contribute to the diversification and reliability of supplies in the region. VWD's UWMP will adhere to a DWR-prepared checklist of items based on the Act that must be addressed in an agency's UWMP. This checklist allows an agency to identify where in its UWMP it has addressed each item. This is included in Appendix I.

Reasonable consistency among the plans of VWD, SDCWA, and MWD is important to accurately identify the projected supplies available to meet regional demands. In order to facilitate coordination within VWD's service area, VWD established its own internal workgroup and also utilized information from SDCWA's Urban Water Management Plan Working Group. This group provided a forum for exchanging demand and local supply information. SDCWA further coordinated its effort by working with appropriate wastewater agencies. These agencies helped prepare the water recycling element of its UWMP, which describes the wastewater treatment requirements and water recycling potential for the region. In addition, MWD held a Regional Urban Water Management Plan coordination meeting with its member agencies to discuss and share information pertaining to demands and supplies within its service areas. The SDCWA further coordinated with MWD regarding projected needs for imported water deliveries. Finally, DWR hosted a webinar on November 30, 2010, and a special workshop on March 7, 2011, to review the requirements of the Act.

As stated in Section 1.1.2 above, VWD has formed a Regional Alliance with OMWD, SDWD, and Rincon MWD pursuant to CWC §10608.28(a), the DWR Guidebook, and the DWR Methodologies, and has coordinated with these water agencies to report progress toward achieving water use targets on a regional basis. A copy of the regional alliance agreement is included in Appendix H.

A draft of the SDCWA's UWMP, which VWD's UWMP is largely based on, was distributed to the SDCWA member agencies on May 6, 2011. The draft UWMP included water supply projections to satisfy CWC §10631(k).

In accordance with the Act, VWD served 60-day notice to the agencies that have land use jurisdiction within its service area on April 11, 2011 that its UWMP is under review and may be revised in concurrence with updated land use information, demand projections and new legislations. This 60-day notice also stated that a public hearing will

be held on June 15, 2011 to receive comments, questions and suggestions regarding VWD's 2010 UWMP, and to discuss VWD's implementation plan for complying with SB7. VWD advertised this notice in the local newspaper (North County Times) once per week for two consecutive weeks prior to the public hearing. Copies of the 60-day notices are included in Appendix A.

Table 1-1: Coordination with Appropriate Agencies

Coordinating Agencies	Participated in developing the plan	Contacted for assistance	Sent a copy of the draft Plan	Sent a notice of intention to adopt
San Diego County Water Authority	X	X	X	
Olivenhain Municipal Water District	X		X	
Rincon del Diablo Municipal Water District	X		X	
San Dieguito Water District	X		X	
County of San Diego			X	X
City of San Marcos			X	X
City of Vista			X	X
City of Escondido			X	X
City of Carlsbad			X	X

VWD adopted its 2010 UWMP following the public hearing at its regularly-scheduled Board of Directors meeting on June 15, 2011. A copy of the approved VWD Board Meeting minutes and the approved and signed Resolution is included in Appendix A.

VWD's 2010 UWMP will be provided to the agencies that have land use jurisdiction within its service area no later than 60 days following its submission to DWR. Copies of these letters of transmittal are included in Appendix B.

1.2 VALLECITOS WATER DISTRICT BACKGROUND / SERVICE AREA

VWD was formed on March 12, 1955 as a water-only district by a group of local farmers who recognized a need for a more substantial water supply than the groundwater found in the San Marcos and Twin Oaks valleys to serve the area. Originally named the San Marcos County Water District, VWD was initially established as an independent special district pursuant to §30000 et seq., Division 12 of the CWC, with the purpose of bringing outside water into the area through the development and operation of a public water supply system that tapped Colorado River water. With the passage of a $998,000 bond issue in 1956, water system construction began. Initially, water deliveries from the SDCWA to the San Marcos County Water District were handled through the Buena Colorado Municipal Water District. In 1981, the San Marcos County Water District became a member of the SDCWA, from which it now receives 100 percent of its potable water supply. On May 1, 1989, the San Marcos County Water District's name was changed to the Vallecitos Water District.

1.2.1 Climate

VWD is located in a semi-arid coastal desert environment, which is characteristically Mediterranean with mild temperatures throughout the year. Prolonged rain storms are rare. More than 80 percent of the region's rainfall occurs between December and March. The area typically receives about 10 inches of rainfall annually, with monthly average temperatures ranging between a low of 50 degrees and high of 72 degrees.

Beautiful landmarks, such as Lake San Marcos, and a temperate climate attract residents to live within VWD's service area.

1.2.2 Demographics

VWD is located in northern San Diego County, bounded by the Olivenhain Municipal Water District to the south, Carlsbad Municipal Water District to the west, Vista Irrigation

District to the northwest, Rainbow Municipal Water District to the north, Valley Center Municipal Water District to the northeast, Rincon MWD to the east, and City of Escondido to the southeast. VWD's service area includes corridors on two major freeways. Interstate 15 stretches along VWD's eastern boundary and State Highway 78 transverses though the middle of its service area.

Of VWD's 29,115 acres, approximately 7,145 are currently residential. Most of this is single-family homes, although recent development is trending more toward multi-family residential. According to the San Diego Association of Governments (SANDAG) 2030 forecast, VWD's population is projected to increase from 87,700 in 2010, to 109,751 by the year 2030.

1.2.3 Water Service

VWD serves a 45-square mile potable water service area. VWD has approximately 21,500 water meters that deliver over 15,500 acre-feet per year of potable water. Currently, VWD delivers water through 323 miles of pipeline and operates 9 pump stations and 20 potable water storage reservoirs ranging in size from 100,000 gallons to 40 million gallons. VWD's total operational storage capacity is 121.6 million gallons. In 2010, VWD provided an average of 13.9 MGD of potable water to residential, commercial, light industrial, institutional, construction, landscape irrigation and agricultural uses.

VWD's Twin Oaks Reservoirs #1 and #2. Reservoir #2 can hold 40 million gallons of water and is said to be the largest prestressed concrete tank in the world.

Inside view of Twin Oaks Reservoir #2 during construction

1.2.4 Wastewater and Recycled Water Service

In 1958, an improvement district was formed to finance the construction of a wastewater collection system. A second improvement district was formed that same year to finance the construction of a wastewater treatment plant, which was completed in 1961. This treatment plant, now known as the Meadowlark Water Reclamation Facility (MRF), was retrofitted in the early 1980's with upgraded treatment technologies and a wastewater treatment and recycled water production capacity of up to 2 MGD.

Today, VWD serves a 23-square mile sewer service area that is much smaller in size than its water service area, as shown in Figure 1-2. This sewer service area can be expanded to the same size as VWD's water service area through annexation of these additional parcels. However, because of its rural nature and land use designations, the Northern Tributary Area, is an area that is likely to remain on septic systems and therefore is not likely to be an area where VWD's wastewater infrastructure will be expanded to in the future.

VWD has over 19,000 sewer service connections with 4 lift stations and 178 miles of pipeline. The average wastewater flow in VWD's service area is currently 6.8 MGD. This wastewater is conveyed to either the Encina Water Pollution Control Facility (EWPCF) or to MRF for treatment. Expansion of MRF was completed in 2008, increasing its recycled water production capacity to 5 MGD. The Carlsbad Municipal Water District (CMWD) and Olivenhain Municipal Water District (OMWD) purchase 4.5 MGD for non-potable purposes, such as landscape irrigation.

VWD has 178 miles of sewer pipeline, which is regularly maintained to ensure reliable service.

Although VWD produces up to 5 MGD of recycled water at MRF and maintains the 54 million-gallon (MG) Mahr Reservoir, VWD does not maintain a recycled water service area within its sphere of influence. All of the recycled water produced is sold to the CMWD and the OMWD. CMWD originally contracted for up to 2.0 MGD during peak summer months, and in 2003, increased that amount to 3.0 MGD. As part of that agreement, VWD also provides CMWD with 32 MG of recycled water storage in the Mahr Reservoir. Also in 2003, the OMWD contracted for up to 1.5 MGD of recycled water and 16 MG of recycled water storage in the Mahr

Reservoir. Excess recycled water is disposed of through a failsafe pipeline that connects to the ocean outfall at the EWPCF.

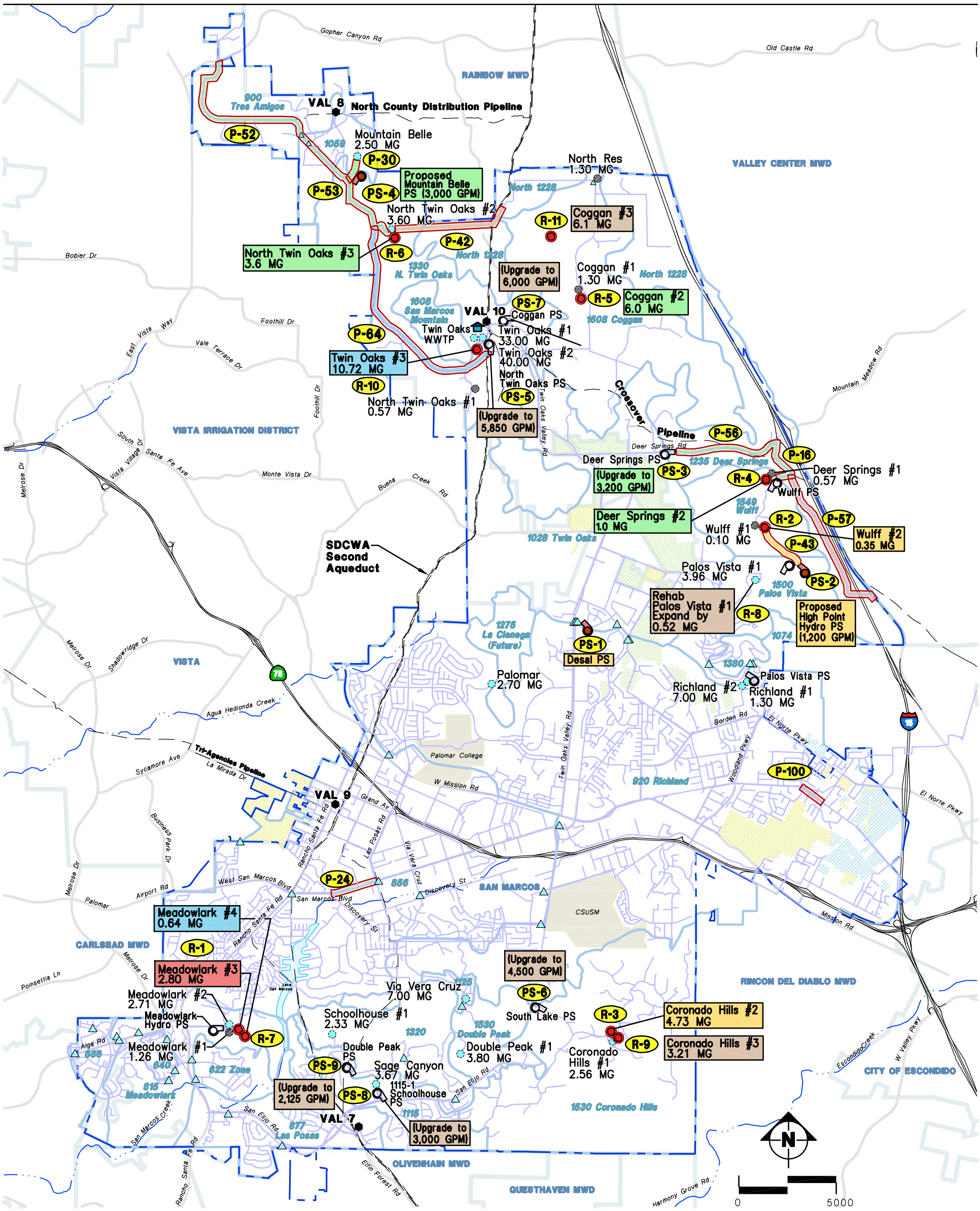
1.3 MASTER PLAN & CAPITAL IMPROVEMENT PROGRAM

The Master Plan and comprehensive Capital Improvement Program (CIP) provide the VWD with guidelines for reliable service to VWD's customers well into the future. In order to accomplish this, VWD's 2008 Water, Wastewater and Recycled Water Master Plan (2008 Master Plan) analyzes existing and future land uses, as well as current water demands and trends. Through use of VWD's ArcGIS/ArcINFO-based Geographic Information System (GIS) and WaterGEMS / SewerGEMS hydraulic modeling software, the 2008 Master Plan evaluates the capacity of the existing water and sewer systems and specifies improvements necessary to serve existing and future customers. Phasing of these improvements is based on regional population projections and known plans for development within VWD's sphere of influence.

A CIP is then developed to guide VWD in timely and cost-effective investments that contribute to the sustainability of its infrastructure and the reliability of service to its customers. CIP projects are prioritized according to how quickly they are needed. Phase 1 projects represent projects that have commenced or were completed by the end of 2010. Phase 2 (2011 – 2015) projects represent high priority projects that should be planned or constructed over the next five years. Lower priority projects are identified as Phase 3 through 5 projects that would be phased over the following fifteen years (2016 – 2030).

The 2008 Master Plan identified 13 potable water pipeline projects totaling approximately 65,480 linear feet, 8 potable water pump station projects that will increase VWD's pumping capacity by 17,950 gallons per minute, and 11 storage projects that will increase VWD's total potable water storage capacity by 39.67 MG. The locations of these projects are shown in Figure 1-3. VWD's total potable water CIP costs through 2030 are estimated to be $79.8 million and breaks down as follows:

- Water Pipeline CIP Total: $18,300,000
- Water Pump Station CIP Total: $11,500,000
- Water Storage CIP Total: $50,000,000



VALLECITOS WATER DISTRICT SPHERE OF INFLUENCE
WATER DISTRICT BOUNDARY
BOOT SERVICE AREA
BENNET SERVICE AREA
SEWER ONLY SERVICE AREA WITHIN THE VWD SOI
PRESSURE ZONE BOUNDARY
SCDWA AQUEDUCT
VAL-9 FLOW CONTROL FACILITY
EXISTING WATER MAIN
EXISTING RESERVOIR
EXISTING RESERVOIR TO BE REMOVED
PROPOSED RESERVOIR

EXISTING PRESSURE REDUCING STATION
EXISTING PUMP STATION
PROPOSED PUMP STATION

PROJECT PRIORITY

PHASE 1 - UP TO 2010
PHASE 2 - 2011 TO 2015
PHASE 3 - 2016 TO 2020
PHASE 4 - 2021 TO 2025
PHASE 5 - 2026 TO 2030

P-100 PIPELINE PROJECT
R-11 RESERVOIR PROJECT
PS-6 PUMP STATION PROJECT

NOTE:
FOR CIP PROJECT REFERENCE, SEE TABLE 8-1

VALLECITOS WATER DISTRICT
2008 WATER DISTRICT MASTER PLAN
WATER CAPITAL IMPROVEMENT PROGRAM

FIGURE 1-3

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